

Work Order ID : 106666

September-11-13 11:17:59 AM

\*106666\*

~~U/R~~

~~See equal  
flashed~~

Page 1

Item ID: 646.3510

Accept

\*N900040100\*

Setup Start

\*NS1\*

Revision ID:

Item Name: Strut

Start Date: 9/23/13 Start Qty: 8.00

\*8\* 810\*

Cust Item ID:

Required Date: 9/23/13 Req'd Qty: 8.00

Customer:

Reference:

Approvals:

Process Plan: MUS

Date: 13-09-13 Tooling:

Date:

Run Start

\*NR1\*

QC:

Date:

SPC (Y/N):

Date:

Stop

\*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
646.3500	N/C U/R

110 0.00

\*110\*

Waterjet

FLOW CNC Waterjet

Memo

0.00

1-Cut 646.3500 plate 2.75"x 1.50" as per Dwg

Dwg Rev: NIC

Prog Rev: NIC

2-Deburr if necessary

120

QC2- Inspect parts off machine FAI/FAIB 0.00

\*120\*

QC

Quality Control

Memo

0.00

10 0 Ac 13-11-00

13-11-00

10 0 Ac 13-11-02

NCR: Yes / No

DQA: Date:

# **WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____				DISPOSITION		AGAINST DEPARTMENT/PROCESS					
				Rework Scrap Use-as-is Work Order Update	Skid-tube Machining Thermoforming Large Fab	Crosstube Small Fab Finishing Composite	Water Jet Prod. Eng. Coor. Rec/Store/Packaging Supplier	Engineering Quality Other			
Part No. _____											
NCR No. _____											
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data											
Equip/Tooling											
Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training											
Unapproved											
FAULT CATEGORY											
Landing Gear				General							
Bending	Bend	Grain	Ovalized	Pressure/Forced							
Centre Not Concentric to O/S	BOM/Route	Hardware	Over/Under tolerance	Temperature/Cure							
Cracks	Broken/Damaged	Inspection Incomplete	Part Incorrect	Weld							
Crushed/Crimped	Burrs	Instructions Incomplete/Unclear	Part Lost/Missing	Wrong Stock Pulled							
Cuffs	Contamination	Maintenance	Part Moved								
Heat Treat	Countersink	Mislabeled	Positioned Wrong								
Inspection Strip in Tube	Cut Too Short	Misread	Power Loss/Surge								
Ripples in Bend	Drill Holes	Offset									
Torque Waves in Extrusion	Drawing	Out of Calibration									
Turning Sequence	Finish	Out of Sequence									
Wave/Twist in Tube	Folio	Outside Dimensions									

Work Order ID 106666

\*106666\*

Page 2

September-11-13 11:17:59 AM

Item ID: 646.3510

Accept

\*N900040100\*

Setup Start

\*NS1\*

Revision ID:

Item Name: Strut

Stop

\*NS2\*

Start Date: 9/23/13 Start Qty: 8.00

\*8\*

Cust Item ID:

Required Date: 9/23/13 Req'd Qty: 8.00

\*8\*

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_

Date: \_\_\_\_\_

Tooling: \_\_\_\_\_

Date: \_\_\_\_\_

Run Start

\*NR1\*

QC: \_\_\_\_\_

Date: \_\_\_\_\_

SPC (Y/N): \_\_\_\_\_

Date: \_\_\_\_\_

Stop

\*NR2\*

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

130

QC8- Inspect parts - second check

0.00

DA:

27

9.8

10

B11C4

140

\*140\*

Small Fab

Memo

0.00

10

13-11-11 MAC

Small Fab

1- Fabricate tube as per dwg

150

QC5- Inspect part completeness to step on W/O

0.00

(3)

13-11-11

DAS  
09

QC

Memo

0.00

Quality Control

NCR: Yes / No

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: Date:

Work Order: _____			DISPOSITION		AGAINST DEPARTMENT/PROCESS					
			Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>			
			Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>			
			Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>			
			Work Order Update <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>				
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector	
Doc/Data										
Equip/Tooling										
Operator										
Material										
Setup										
Other										
Process										
Supplier										
Training										
Unapproved										
FAULT CATEGORY										
Landing Gear	General									
	Bending <input type="checkbox"/>	Bend <input type="checkbox"/>	Grain <input type="checkbox"/>	Ovalized <input type="checkbox"/>	Pressure/Forced <input type="checkbox"/>					
	Centre Not Concentric to O/S <input type="checkbox"/>	BOM/Route <input type="checkbox"/>	Hardware <input type="checkbox"/>	Over/Under tolerance <input type="checkbox"/>	Temperature/Cure <input type="checkbox"/>					
	Cracks <input type="checkbox"/>	Broken/Damaged <input type="checkbox"/>	Inspection Incomplete <input type="checkbox"/>	Part Incorrect <input type="checkbox"/>	Weld <input type="checkbox"/>					
	Crushed/Crimped <input type="checkbox"/>	Burrs <input type="checkbox"/>	Instructions Incomplete/Unclear <input type="checkbox"/>	Part Lost/Missing <input type="checkbox"/>	Wrong Stock Pulled <input type="checkbox"/>					
	Cuffs <input type="checkbox"/>	Contamination <input type="checkbox"/>	Maintenance <input type="checkbox"/>	Part Moved <input type="checkbox"/>						
	Heat Treat <input type="checkbox"/>	Countersink <input type="checkbox"/>	Mislabeled <input type="checkbox"/>	Positioned Wrong <input type="checkbox"/>						
	Inspection Strip in Tube <input type="checkbox"/>	Cut Too Short <input type="checkbox"/>	Misread <input type="checkbox"/>	Power Loss/Surge <input type="checkbox"/>	Other <input type="checkbox"/>					
	Ripples in Bend <input type="checkbox"/>	Drill Holes <input type="checkbox"/>	Offset <input type="checkbox"/>							
	Torque Waves in Extrusion <input type="checkbox"/>	Drawing <input type="checkbox"/>	Out of Calibration <input type="checkbox"/>							
	Turning Sequence <input type="checkbox"/>	Finish <input type="checkbox"/>	Out of Sequence <input type="checkbox"/>							
	Wave/Twist in Tube <input type="checkbox"/>	Folio <input type="checkbox"/>	Outside Dimensions <input type="checkbox"/>							

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**\*106666\***

Page 3

Item ID: 646.3510

Accept

**\*N900040100\***

Setup

Start

**\*NS1\***

Revision ID:

Item Name: Strut

Stop

**\*NS2\***

Start Date: 9/23/13 Start Qty: 8.00

**\*8\***

Cust Item ID:

Required Date: 9/23/13 Req'd Qty: 8.00

**\*8\***

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start

**\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop

**\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160 <b>*160*</b> Large Fab	Weld per dwg A/R Aluminum rod Batch: <u>M125054</u> 0.00								
	Memo	0.00							
	Weld tube to plate as per dwg. DT9867								
	Weld end were tube is punch.								
170 <b>*170*</b> QC Quality Control	QC9- Inspect visual per QSI004- Fusion Welds	0.00							
	Memo	0.00							
180 <b>*180*</b> QC Quality Control	QC5- Inspect part completeness to step on W/O	0.00							
	Memo	0.00							

10    13-11-13 MACDAS  
9  
9-8910    R2    13-11-15(W)    13-11-15    DAS  
9  
9-89

NCR: Yes / No

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: Date:

Work Order: _____			DISPOSITION		AGAINST DEPARTMENT/PROCESS					
Part No. _____	Rework <input type="checkbox"/>	Scrap <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>				
NCR No. _____	Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>				
	Work Order Update <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Supplier <input type="checkbox"/>	Other <input type="checkbox"/>				
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector	
Doc/Data										
Equip/Tooling										
Operator										
Material										
Setup										
Other										
Process										
Supplier										
Training										
Unapproved										
FAULT CATEGORY										
Landing Gear	General									
	Bending <input type="checkbox"/>	Bend <input type="checkbox"/>	Grain <input type="checkbox"/>	Ovalized <input type="checkbox"/>	Pressure/Forced <input type="checkbox"/>					
	Centre Not Concentric to O/S <input type="checkbox"/>	BOM/Route <input type="checkbox"/>	Hardware <input type="checkbox"/>	Over/Under tolerance <input type="checkbox"/>	Temperature/Cure <input type="checkbox"/>					
	Cracks <input type="checkbox"/>	Broken/Damaged <input type="checkbox"/>	Inspection Incomplete <input type="checkbox"/>	Part Incorrect <input type="checkbox"/>	Weld <input type="checkbox"/>					
	Crushed/Crimped <input type="checkbox"/>	Burrs <input type="checkbox"/>	Instructions Incomplete/Unclear <input type="checkbox"/>	Part Lost/Missing <input type="checkbox"/>	Wrong Stock Pulled <input type="checkbox"/>					
	Cuffs <input type="checkbox"/>	Contamination <input type="checkbox"/>	Maintenance <input type="checkbox"/>	Part Moved <input type="checkbox"/>						
	Heat Treat <input type="checkbox"/>	Countersink <input type="checkbox"/>	Mislabeled <input type="checkbox"/>	Positioned Wrong <input type="checkbox"/>						
	Inspection Strip in Tube <input type="checkbox"/>	Cut Too Short <input type="checkbox"/>	Misread <input type="checkbox"/>	Power Loss/Surge <input type="checkbox"/>						
	Ripples in Bend <input type="checkbox"/>	Drill Holes <input type="checkbox"/>	Offset <input type="checkbox"/>		Other <input type="checkbox"/>					
	Torque Waves in Extrusion <input type="checkbox"/>	Drawing <input type="checkbox"/>	Out of Calibration <input type="checkbox"/>							
Turning Sequence <input type="checkbox"/>	Finish <input type="checkbox"/>	Out of Sequence <input type="checkbox"/>								
Wave/Twist in Tube <input type="checkbox"/>	Folio <input type="checkbox"/>	Outside Dimensions <input type="checkbox"/>								

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**Item ID:** 646.3510

Accept

**\*N900040100\***

Setup

Start

**\*NS1\***

**Revision ID:**

**Item Name:** Strut

Stop

**\*NS2\***

**Start Date:** 9/23/13    **Start Qty:** 8.00

**\*8\***

**Cust Item ID:**

**Required Date:** 9/23/13    **Req'd Qty:** 8.00

**\*8\***

**Customer:**

**Reference:**

**Approvals:** **Process Plan:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Tooling:** \_\_\_\_\_

**Date:** \_\_\_\_\_

Run

Start

**\*NR1\***

**QC:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**SPC (Y/N):** \_\_\_\_\_

**Date:** \_\_\_\_\_

Stop

**\*NR2\***

**Sequence ID/  
Work Center ID**  
220

**Operation  
Description**

**Set Up/  
Run Hours**

**Tool ID**

**Tool #**

**Plan  
Code**

**Accept  
Qty**

**Reject  
Qty**

**Reject  
Number**

**Insp.  
Stamp**

**\*220\***

SprayPaint

Spray Painting

**Memo**

Prime as per dwg (see note 3)

Batch: 127401

0.00

10

Ø

Ø

A

13-12-2

230

QC14- Inspect Spray Paint

0.00

10

(DAS  
05  
9-89)

13-12-3

**\*230\***

QC

Quality Control

**Memo**

0.00

240

**\*240\***

Packaging

Packaging

**Memo**

0.00

\*\*\*IDENTIFY AS PER APICAL MPP-120 BY STAMPING THE P# AND  
REV\*\*\*

ST

523

DAS

26

9-89

13-12-3.

NCR: Yes / No

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____			DISPOSITION			AGAINST DEPARTMENT/PROCESS					
			Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>				
			Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>				
			Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>				
			Work Order Update <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>					
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data											
Equip/Tooling											
Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training											
Unapproved											
FAULT CATEGORY											
<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube				<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio		<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions				<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>	
										<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled	
										<input type="checkbox"/> Other	

**Work Order ID 106666**

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Item ID: 646.3510

Accept

**\*N900040100\***

Setup

Start

**\*NS1\***

Revision ID:

Item Name: Strut

Stop

**\*NS2\***

Start Date: 9/23/13 Start Qty: 8.00

**\*8\***

Cust Item ID:

Required Date: 9/23/13 Req'd Qty: 8.00

**\*8\***

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start

**\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop

**\*NR2\***

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

250

QC21- Final Inspection - Work Order Release

0.00

JF

Rm

13/12/03

**\*250\***

QC

Quality Control

Memo

0.00

13-123

NCR: Yes / No

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: Date:

Work Order: _____			DISPOSITION		AGAINST DEPARTMENT/PROCESS										
Part No. _____	Rework <input type="checkbox"/>	Scrap <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>									
NCR No. _____	Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Finishing <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>									
	Work Order Update <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Supplier <input type="checkbox"/>	Other <input type="checkbox"/>									
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector						
Doc/Data															
Equip/Tooling															
Operator															
Material															
Setup															
Other															
Process															
Supplier															
Training															
Unapproved															
FAULT CATEGORY															
<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube				<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio		<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions				<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge		<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled			
														<input type="checkbox"/> Other	

# Picklist Print

September-11-13 11:17:58 AM

Page 1

Work Order ID: 106666

Parent Item: 646.3510

Start Date: 9/23/13

Required Date: 9/23/13

Parent Item Name: Strut

Start Qty: 8.00

Required Qty: 8.00

Comments: IPP REV:A 12.10.19 NEW ISSUE DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

M304S16GA 304/316 Sheet .063	Purchased	No					sf	234.9920		<u>0.2341056</u>			<i>Ac</i>
---------------------------------	-----------	----	--	--	--	--	----	----------	--	------------------	--	--	-----------

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
MAT020	234.9919998	
122245	0.1713688	
123136	140.8	
124428	23.61	
125599	5.410631	
M126159	65	

*13-11-02*

M304TR0.500W.049 304 RD Tube .500 x .049W	Purchased	No	<u>MAT020</u>	f	359.9887		<u>7.0147368</u>	
----------------------------------------------	-----------	----	---------------	---	----------	--	------------------	--

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
GA	43.66	
120633	43.66	
MAT017	316.328716	
119087	0.000016	
123449	86.0547	
125513	30.274	
<i>m126466</i>	<i>200</i>	

*126159 → .28*

*7.0147368*

*13-11-13 MAL*

NCR: Yes / No

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____			DISPOSITION			AGAINST DEPARTMENT/PROCESS					
Part No. _____	Rework <input type="checkbox"/>	Scrap <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>					
NCR No. _____	Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>						
	Work Order Update <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Supplier <input type="checkbox"/>					
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data											
Equip/Tooling											
Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training											
Unapproved											
FAULT CATEGORY											
Landing Gear	Bending <input type="checkbox"/>	General <input type="checkbox"/>	Grain <input type="checkbox"/>	Ovalized <input type="checkbox"/>	Pressure/Forced <input type="checkbox"/>						
	Centre Not Concentric to O/S <input type="checkbox"/>	BOM/Route <input type="checkbox"/>	Hardware <input type="checkbox"/>	Over/Under tolerance <input type="checkbox"/>	Temperature/Cure <input type="checkbox"/>						
	Cracks <input type="checkbox"/>	Broken/Damaged <input type="checkbox"/>	Inspection Incomplete <input type="checkbox"/>	Part Incorrect <input type="checkbox"/>	Weld <input type="checkbox"/>						
	Crushed/Crimped <input type="checkbox"/>	Burrs <input type="checkbox"/>	Instructions Incomplete/Unclear <input type="checkbox"/>	Part Lost/Missing <input type="checkbox"/>	Wrong Stock Pulled <input type="checkbox"/>						
	Cuffs <input type="checkbox"/>	Contamination <input type="checkbox"/>	Maintenance <input type="checkbox"/>	Part Moved <input type="checkbox"/>							
	Heat Treat <input type="checkbox"/>	Countersink <input type="checkbox"/>	Mislabeled <input type="checkbox"/>	Positioned Wrong <input type="checkbox"/>							
	Inspection Strip in Tube <input type="checkbox"/>	Cut Too Short <input type="checkbox"/>	Misread <input type="checkbox"/>	Power Loss/Surge <input type="checkbox"/>	Other <input type="checkbox"/>						
	Ripples in Bend <input type="checkbox"/>	Drill Holes <input type="checkbox"/>	Offset <input type="checkbox"/>								
	Torque Waves in Extrusion <input type="checkbox"/>	Drawing <input type="checkbox"/>	Out of Calibration <input type="checkbox"/>								
	Turning Sequence <input type="checkbox"/>	Finish <input type="checkbox"/>	Out of Sequence <input type="checkbox"/>								
	Wave/Twist in Tube <input type="checkbox"/>	Folio <input type="checkbox"/>	Outside Dimensions <input type="checkbox"/>								

DART AEROSPACE LTD	Work Order:	1060606
Description:	Part Number:	
Inspection Dwg:	Rev:	Page 1 of 1

# FIRST ARTICLE INSPECTION CHECKLIST

27

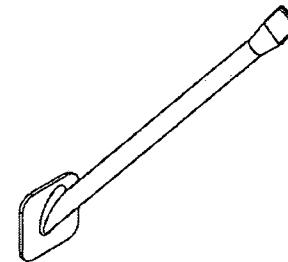
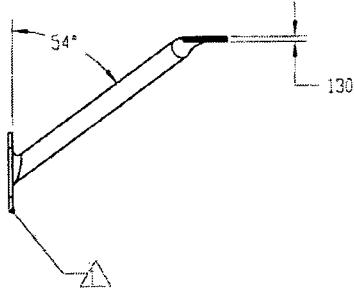
Measured by:	<i>A</i>	Audited by:	9-89	Preliminary Approval:	
Date:	13/11/02	Date:	13/11/04	Date:	

Rev	Date	Change	Revised by	Approved
E	10.04.14	Added preliminary approval	KJ	

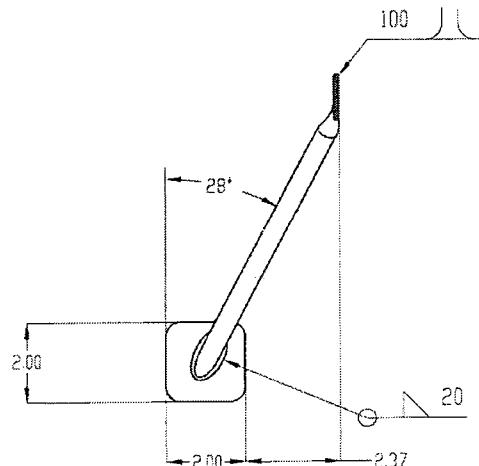
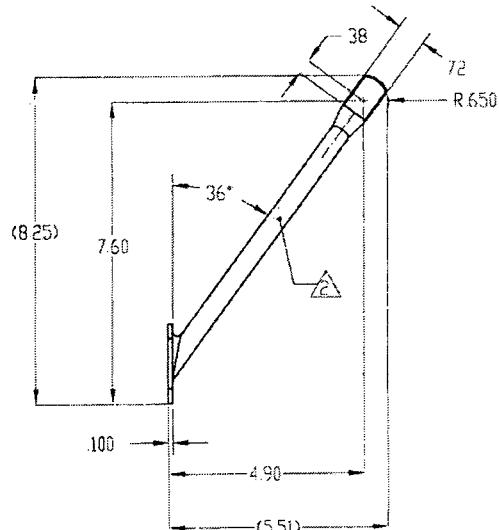
10.04.15

APICAL INDUSTRIES, INC.	ENGINEERING CHANGE NOTICE		NO. 02440	SHEET 1 OF 1	
	DWG NO. 646.3500	REV: NC	PREPARED BY S. HUFF	DATE 06/08/09	EFFECT ON DWG <input type="checkbox"/> INC. <input checked="" type="checkbox"/> UNINC.
DWG TITLE:		STRUT			
APPROVED BY:	ENGR <i>[Signature]</i>	MFG	QC	EFF:	CURRENT ORDER AND STOCK
TRANSACTION CODES (TC): A-ADD C-CREATE R-REVISE D-DELETE REASON: REVISED GEOMETRY TO ACCOMMODATE NEW EXISTING AIRCRAFT PROVISIONS					

SHEET 2 IS:



646.3512 SHOWN  
646.3513 OPPOSITE



106666-MJ5  
13-09-13

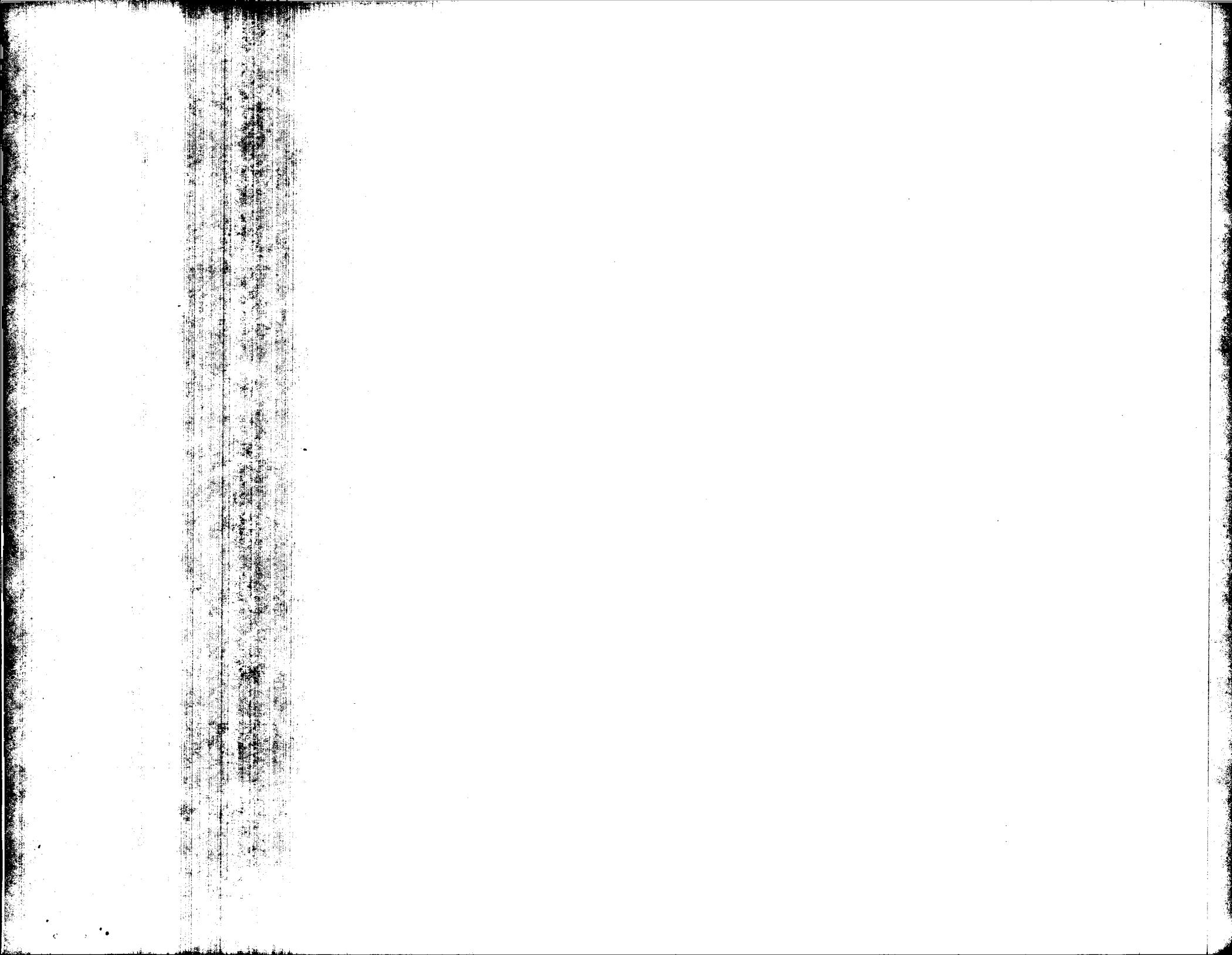
DOCUMENTS EFFECTED:

MDL  INSTALL INSTRUC

ICA  FMS  BOM

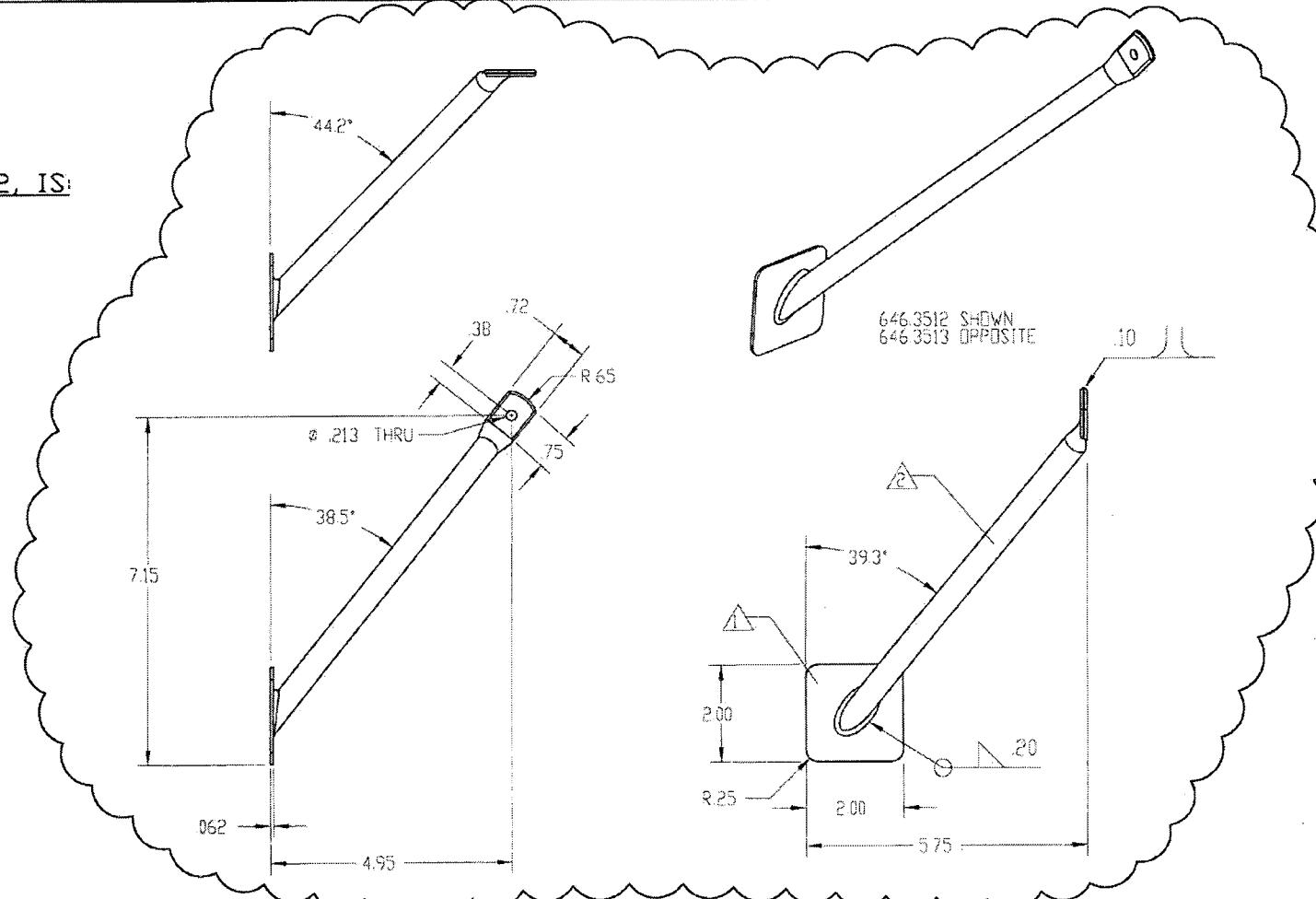
CHANGE CATEGORY  
 MAJOR  MINOR

DER REVIEW REQUIRED  
 YES  NO



106666

APICAL INDUSTRIES, INC.	ENGINEERING CHANGE NOTICE NO.			02197	SHEET 1 OF 1	
	DWG NO.	646.3500	REV:N/C	PREPARED BY	S. HUFF	EFFECT ON DWG <input type="checkbox"/> INC. <input checked="" type="checkbox"/> UNINC.
	DWG TITLE:			STRUT		
	APPROVED BY:	ENGR <i>P. Brana</i>	MFG <i>D. Clarke</i>	QC <i>S. J. S.</i>	EFF:	NEXT ORDER
TRANSACTION CODES (TC): A-ADD C-CREATE R-REVISE D-DELETE		REASON: REVISED ANGLE OF 646.3512 & 646.3513 FOR BETTER FITMENT				

SHEET 2, IS:

DOCUMENTS EFFECTED:	<input type="checkbox"/> MDL <input type="checkbox"/> INSTALL INSTRUC <input type="checkbox"/> ICA <input type="checkbox"/> FMS <input type="checkbox"/> BOM	CHANGE CATEGORY <input type="checkbox"/> MAJOR <input checked="" type="checkbox"/> MINOR	DER REVIEW REQUIRED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
---------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------

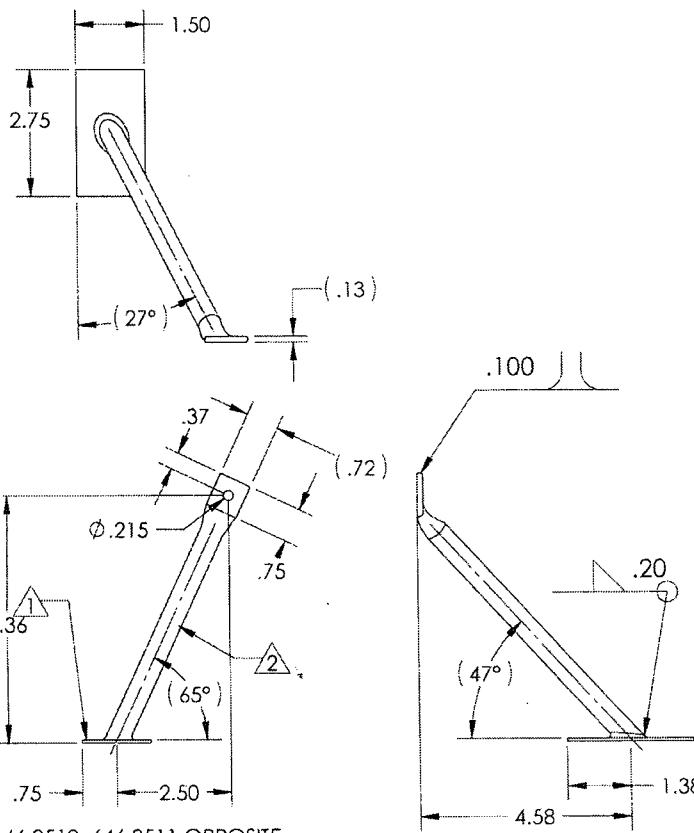
1 2  
3 4 5 6 7 8

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THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.

REV.	DESCRIPTION	DATE	APPROVED

NOTES:

- 1 MATERIAL: 6061-T6 ALUMINUM IAW AMS-QQ-A-250/11; .062" THK.
- 2 MATERIAL: 6061-T6 ALUMINUM IAW AMS-WW-T-700/6 .500" OD; .062" WALL THK
- 3 FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2 COLOR BLACK;  
CARDINAL 4860-50 PRETREATMENT PRIMER PRIME IAW MIL-P-2337J TYPE I CLASS N
- 4. DEBURR AND BREAK ALL SHARP EDGES
- 5. WELDS IAW MIL-STD-2219,  
TIG WELD WITH FILLER ROD



646.3510 SHOWN  
646.3511 OPPOSITE

UNINCORPORATED ECN(s)

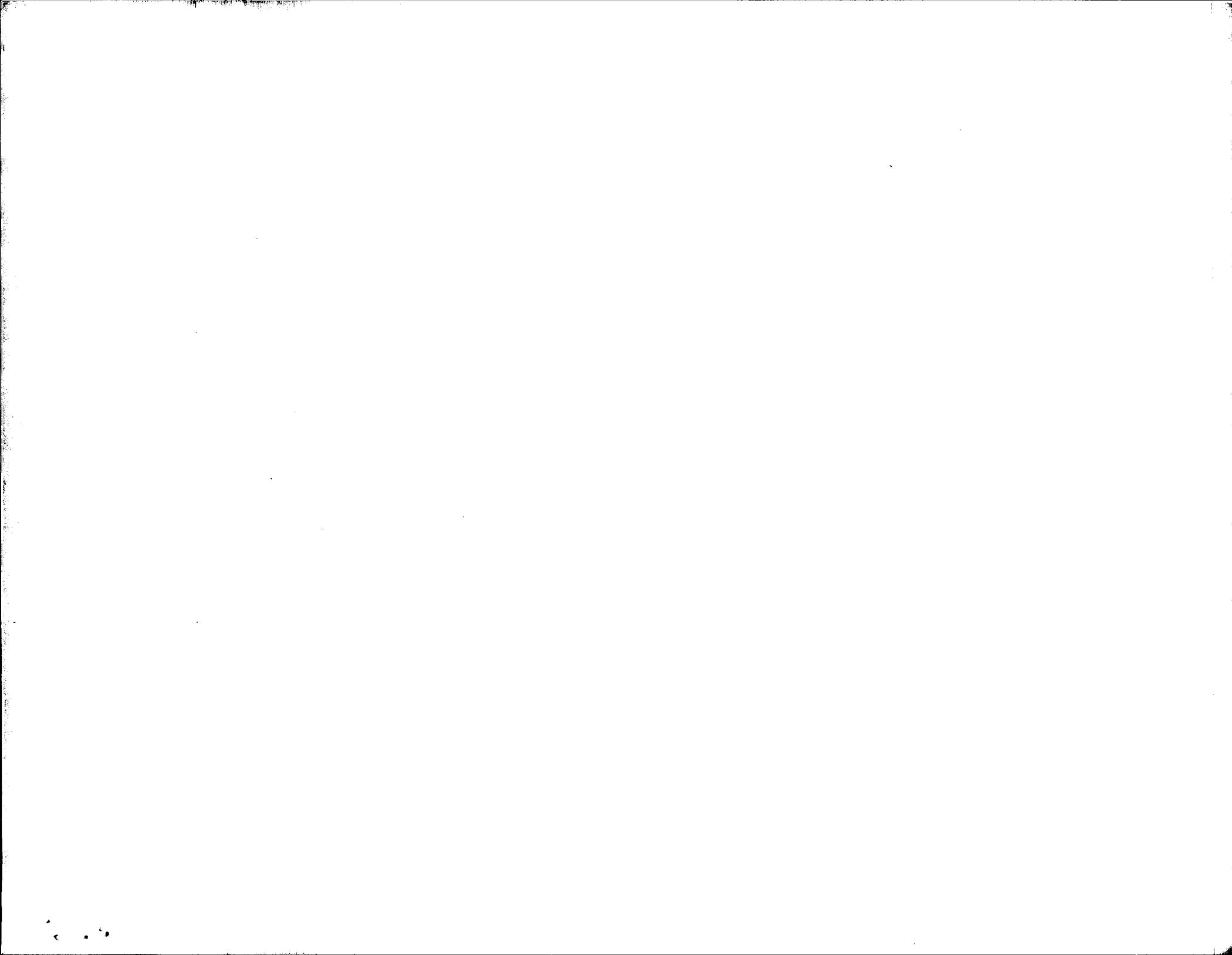
02197, 02440, \_\_\_\_\_

QTY	REF ID #	PART #	PARTS LIST		
			DESCRIPTION	MATL	SPEC.
		646.3513	STRUT	△△	△
		646.3512	STRUT	△△△	△△
		646.3511	STRUT	△△△	△△
		646.3510	STRUT	△△△	△△

APICAL INDUSTRIES  
2608 TEMPLE HEIGHTS DR.  
OCEANSIDE, CA. 92056-3512 (760)724-5300

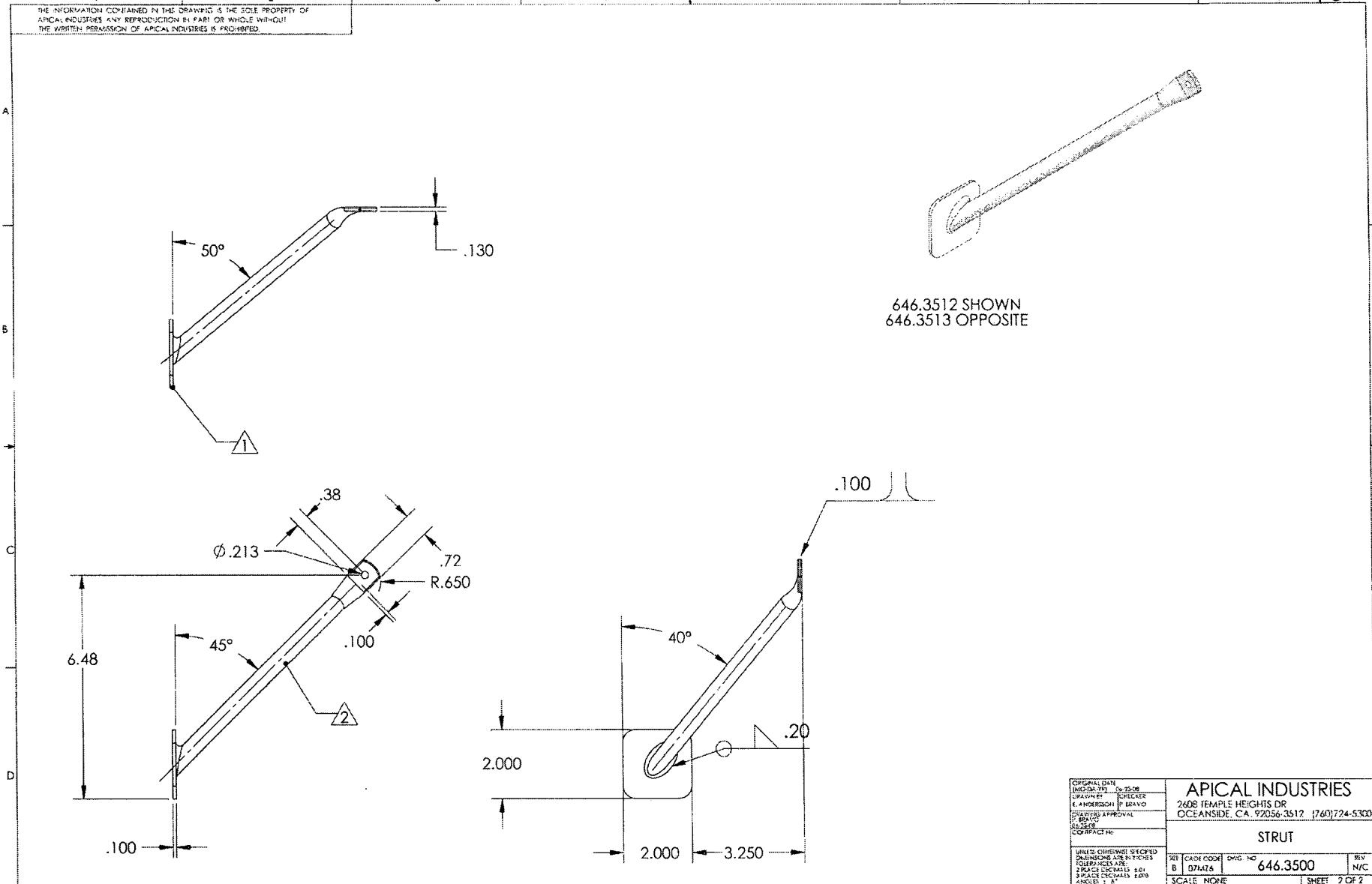
STRUT

REF ID #	CAGE CODE	DWG. NO.	REV.
B	07MA	646.3500	N/C
SCALE: NONE		1 SHEET	1 OF 2



1 2 3 4 5 6 7 8  
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106666



ORIGINAL DATE	APICAL INDUSTRIES		
INSTRUMENT NO.	2408 TEMPLE HEIGHTS DR		
DESIGNER	OCEANSIDE, CA 92056-3512 (760)724-5300		
DRAWER	E-A HORNIGSON P BRAVO		
CHANGER APPROVAL			
DATE			
REVISION			
COMPONENT NO.			
UNITS: INCHES/ONE SECOND			
DIMENSIONS ARE IN INCHES			
TOLENCIES ARE			
1/16 INCHES (0.0625)			
3 PLACE DECIMALS (0.001)			
ANCHORS: 1"			
SET	CASE CODE	DRWG. NO.	REV.
B	07MATA	646.3500	N/C
SCALE	MICRO	SHEET	2 OF 2

## Linda Lacelle

---

**From:** Pablo Bravo  
**Sent:** September-13-13 12:11 PM  
**To:** Jean-Luc Menard  
**Cc:** Linda Lacelle  
**Subject:** Re: STRUTS 646.3500

JL,

Go ahead and manufacture the parts you need to replenish stock. I'll try to get a date for the drawing release ASAP.

Pablo

On Sep 13, 2013, at 8:31 AM, "Jean-Luc Menard" <[jmenard@dartaero.com](mailto:jmenard@dartaero.com)> wrote:

Hi Pablo,  
As discussed yesterday,dwg's are under review.  
Just need your blessing so we can manufacture to meet current orders.  
THX  
JL

**Jean-Luc Ménard**  
*Production Engineering Supervisor*

**DART AEROSPACE**  
**T 1 613 632-5200 > 227**  
**F 1 613 632-5246**  
**1 800 556- 4166**  
[www.dartaerospace.com](http://www.dartaerospace.com)

<image001.png>